NEW SET OF CLAIMS

1. A conditioning device for plastic preforms (5) comprising a turret (6), having at least one face (6', 6") provided with a plurality of cavities (7) for conditioning the preforms (5), the cavities (7) being adapted for holding in their inside said preforms (5), the turret being fixed to a supporting structure with motor means adapted to make the turret carry out spatial movements, characterised by the fact that said turret (6) has a structure comprising a first bar (18) in the shape of a parallelepiped, a second bar (19) parallel to the first bar, one or more substantially rectangular plates (14, 17) characterised in that the one or more substantially rectangular plates (14, 17) are exchangeable, have a thickness smaller than that of said first (18) and second (19) bars, are supported at one end by the first (18) bar, at a second end by the second bar (19) and are comprised in said at least one face (6', 6").

2. A device as claimed in claim 1, wherein the preforms (5) define a neck and the conditioning cavities (7) are provided with means (10', 10") suitable for holding the preforms (5) with the neck facing a downward position.

3. A device as claimed in claim 2, wherein said spatial movements comprise a first movement of rotation around a substantially horizontal axis (X) and a second translation movement between a first position at the height of the means (3) for extracting the preforms from the mould and a second position near a device (23) for extracting the preforms (5) from the cavities (7).

4. A device as claimed in claim 3, wherein the axis of rotation (X) is horizontal and is essentially orthogonal to a direction (C) for conveying the preforms (5) away from a mould.

5. A device as claimed in claim 4, wherein the extracting device is placed under said lower second position of the turret (6), and is provided with gripping means suitable for extracting the preforms from the cavities (7) of the turret (6).

6. A device as claimed in claim 1 or 5 wherein said plates (14, 17) are more than one and each plate (14, 17) supports several cavities.

7. A device as claimed in claim 6, wherein the first bar (18) houses ducts suitable for conveying the working fluids.

8. A process for conditioning plastic preforms (5) using the device as claimed in

claim 1, wherein several preforms are moulded in an appropriate mould comprising several mould cavities where the preforms remain until the plastic reaches a specific consistency and, then, are ejected when they are still warmer than room temperature, the process comprising the following stages:

a) Transferring the preforms to a location outside the mould,

b) Inserting the preforms in corresponding cavities (7) of the turret (6),

c) Cooling the preforms (5) until they reach a second, predefined temperature,

d) Making the turret (6) pivot around a substantially horizontal axis

characterised in that there are provided the stages of :

e) making the turret (6) translate verticallly to a lower position,

f) removing the preforms (5) from the cavities (7) by means of gripping means provided on an unloading table (23).

9. A process as claimed in claim 8 wherein the turret (6) is equipped with a number of cavities that is a multiple of the plurality of injection mould cavities and where the cooling stage c) is a multiple of the injection cycle.

10. A process as claimed in claim 8 wherein the extraction of the preforms (5) from the cavities (7) is carried out through gripping, using the width constrictions of slits provided in the unloading table suitable for inserting into specific portions of the preforms.

11. A process as claimed in claim 9, wherein the width constrictions of the slits are in the shape of teeth.

12. A process as claimed in claim 10, wherein the preforms are preforms and the teeth are inserted between a ring (9) placed near the neck of the preform (5) and the end of the holder (7) housing said preform.